

Work Order ID 122938

Tuesday, July 29, 2014 2:26:24 PM

122938

Page 1

Item ID: 646.3811

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Radius Block

Start Date: 7/29/14 Start Qty: 20.00

***20*15**

Cust Item ID:

Required Date: 7/29/14 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan: WmDate: 7/30/14

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr | Revision Nbr | | | | | | | | |
| 646.3800 | N/C | | | | | | | | |

110

0.00

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine per DWG
DWG REV: _____15 0 3.C.L. 14/08/26 ML

2- deburr and break all sharp edges

120

0.00

120

QC

Memo

0.00

Quality Control

15 0 3.C.L. 14/08/26 ML

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | |
|--|--|---|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div> |
|--|--|---|

| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | |
|---|--|---|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence |
| <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge </div> <div> <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other </div> </div> | | |

Work Order ID 122938

Tuesday, July 29, 2014 2:26:25 PM

122938

Page 2

Item ID: 646.3811 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Radius Block
 Start Date: 7/29/14 Start Qty: 20.00 ***20*** Cust Item ID:
 Required Date: 7/29/14 Req'd Qty: 20.00 ***20*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|------------------------------------|
| 130 | QC8- Inspect parts - second check | 0.00 | | | | | | | |
| *130* | | | | | | | | | |
| QC | Memo | 0.00 | | | | 15 | 0 | | DAS 44 9-89 14/08/27 |
| Quality Control | | | | | | | | | |
| 140 | Outsource process-Anodize per QSI017 4.1.10.1 | 0.00 | | | | | | | |
| *140* | | | | | | | | | |
| Outsource4 | Memo | 0.00 | | | | | | | |
| Outsource process - Anodize | Issue P/O to ATG: <u>25560</u> | | | | | | | | |
| | 1- Black Anodize as per Dwg 646.3800 | | | | | | | | |
| | 2- PRIME AS PER DWG, SEE NOTE #2 | | | | | | | | DAS 41 14-9-7 128987 9-89 |
| | Certification of Comformity is required | | | | | | | | |
| 150 | Receive & Inspect for Damage & Mat'l Certs | 0.00 | | | | | | | |
| *150* | | | | | | | | | |
| Packaging | Memo | 0.00 | | | | | | | |
| Packaging | | | | | | | | | |

Handwritten signatures and dates:
 14/8/20
 7/9/13 (15)

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | |
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| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div> |
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| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | | |
|--|--|---|--|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |
|--|--|---|--|

Work Order ID 122938

Tuesday, July 29, 2014 2:26:25 PM

122938

Page 3

Item ID: 646.3811 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Radius Block
Start Date: 7/29/14 Start Qty: 20.00 ***20*** Cust Item ID:
Required Date: 7/29/14 Req'd Qty: 20.00 ***20*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|--------------------------|
| 155 | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | DAS 38 9-89 14-9-8 |
| *155* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |
| 180 | Identify as per dwg & Stock Location: <u>57104</u> | 0.00 | | | | | | | DAS 26 9-89 |
| *180* | | | | | | | | | |
| Packaging | Memo | 0.00 | | | | | | | |
| Packaging | ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV*** | | | | | | | | |
| 190 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | |
| *190* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

15x 14-9-8
MLJ 14-09-09
MF 14-9-8

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | | | | | | | | | | | | | | | | | |
|--|--|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | |
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| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
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| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | | |
|--|--|---|--|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |
|--|--|---|--|

Picklist Print

Tuesday, July 29, 2014 2:26:24 PM

Page 1

Work Order ID: 122938

122938

Parent Item: 646.3811

646 3811

Parent Item Name: Radius Block

Start Date: 7/29/14

Required Date: 7/29/14

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP REV:A NEW ISSUE 12-10-22 JLM VERIFIED:DD

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M7075T6B1.000X00.25 0 | | Purchased | | No | | | f | 4.3459 | | 3 | | | |

M7075T6B1 000X00 250

7075-T6 BAR 1.000' X 0.250"

Location

Loc Qty

Loc Code

MAT049

4.3459

m127614

4.3459

3.9

J.C.-L.

14/08/20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | | | | | | | | | | | | | | | | | |
|--|--|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | |
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| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
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| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
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| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
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| Unapproved | | | | | | | | | |

FAULT CATEGORY

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|--|--|---|--|

| | | | | | | |
|--|--------------------------------------|------------------------|-----------------------|-----------------|---|--|
| APICAL INDUSTRIES, INC. | ENGINEERING CHANGE NOTICE NO. 03697 | | | | SHEET 1 OF 1 | |
| | DWG NO. 646.3800 | REV: N/C | PREPARED BY B. PETERS | DATE: 11/14/12 | EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC. | |
| | DWG TITLE: BRACKETS | | | | | |
| | APPROVED BY: ENGR <i>[Signature]</i> | MFG <i>David Baker</i> | QC <i>[Signature]</i> | EFF: NEXT ORDER | | |
| TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE | REASON: ADDED ALTERNATE MATERIAL. | | | | ECR: D-12-006 | |

IS

⚠ PRIMARY MATERIAL: 7075-T651 ALUMINUM PER AMS-QQ-A-250/12.
ALTERNATE MATERIAL: 7075-T6511 ALUMINUM PER AMS-QQ-A-200/11.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 122938
7/30/14

SHEET 1, ZONE A2 IS:

| F/N | TC | PART NUMBER | QTY | DESCRIPTION | MATERIAL | SPECIFICATION |
|---------------------|----|-------------|-----|--|---|--|
| DOCUMENTS EFFECTED: | | | | <input type="checkbox"/> RFMS <input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUCC <input type="checkbox"/> ICA <input type="checkbox"/> BOM | CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR | DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |

1 2 3 4 5

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF
APICAL INDUSTRIES ANY REPRODUCTION IN PART OR WHOLE WITHOUT
THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

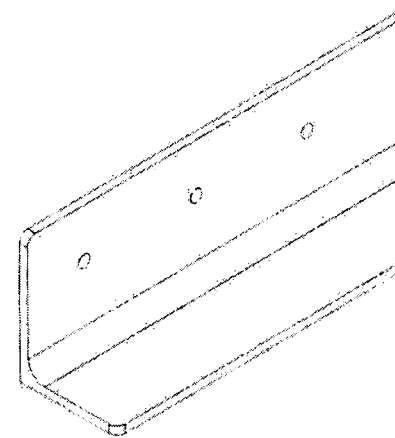
NOTES:

1 MATERIAL: ALUMINUM 7075-T651 AMS-QQ-A-250/12

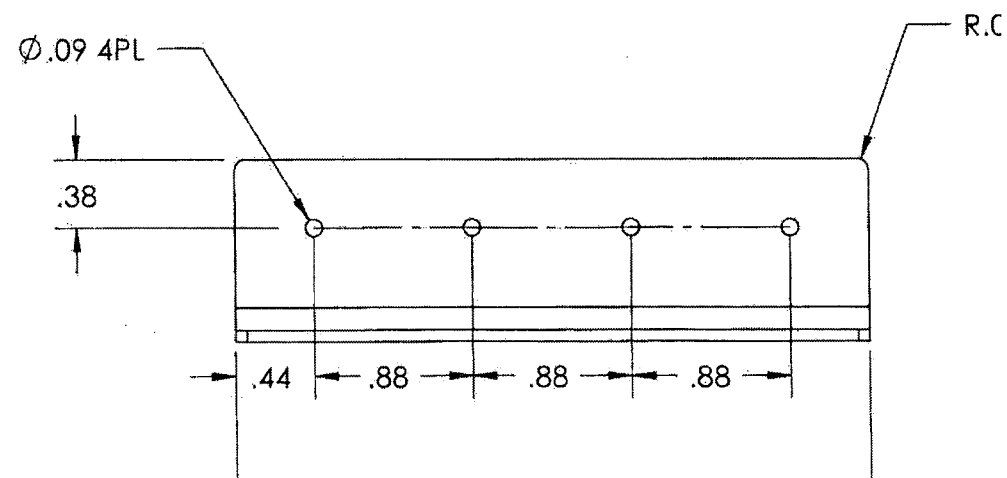
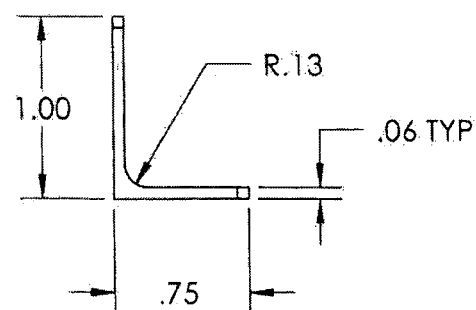
2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III,
CLASS 2, COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N

3. DEBURR AND BREAK ALL SHARP EDGES

4. IDENTIFY IAW MPP-120



646.381



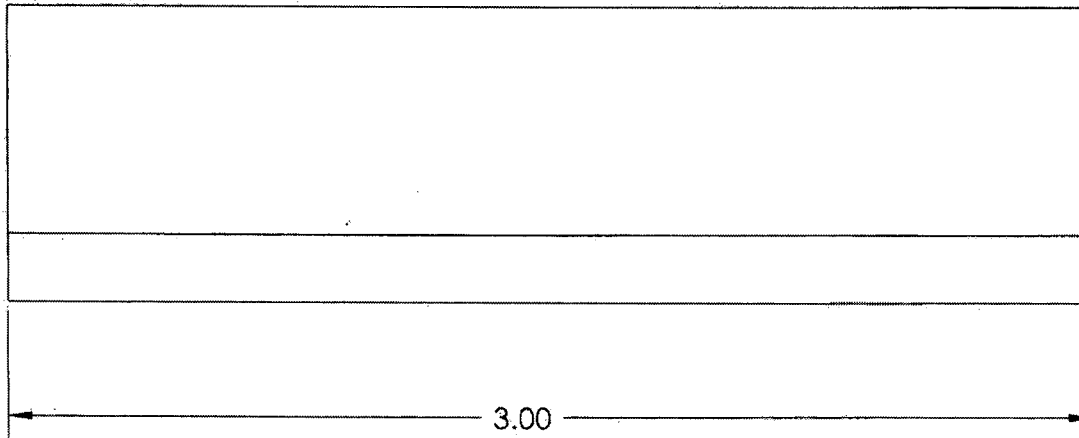
1 2 3 4 5

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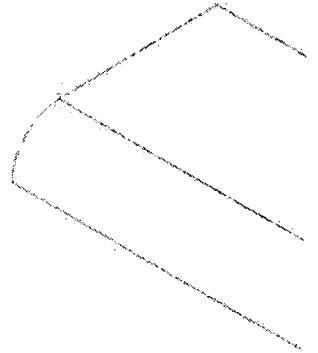
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R.19



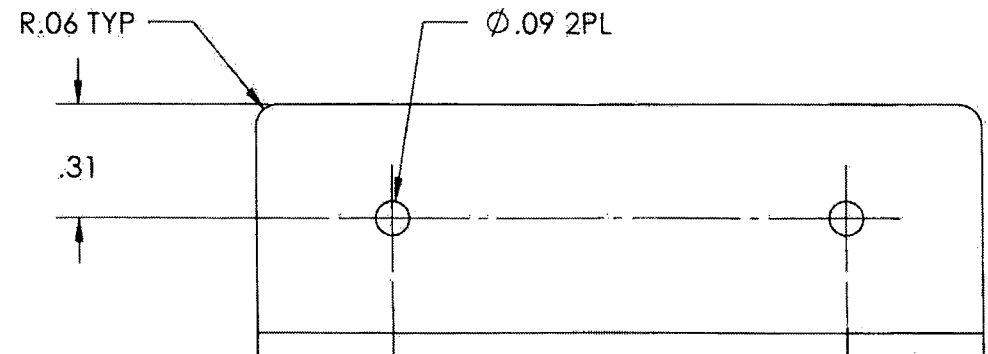
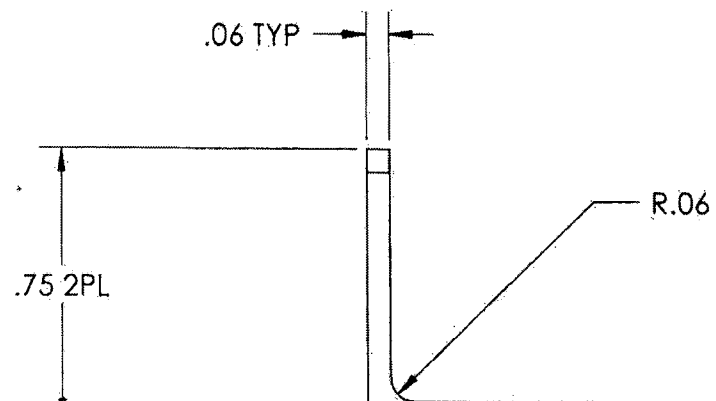
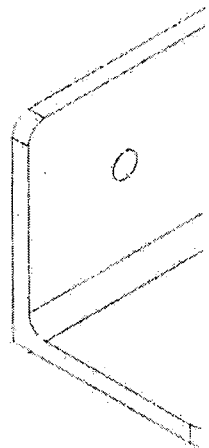
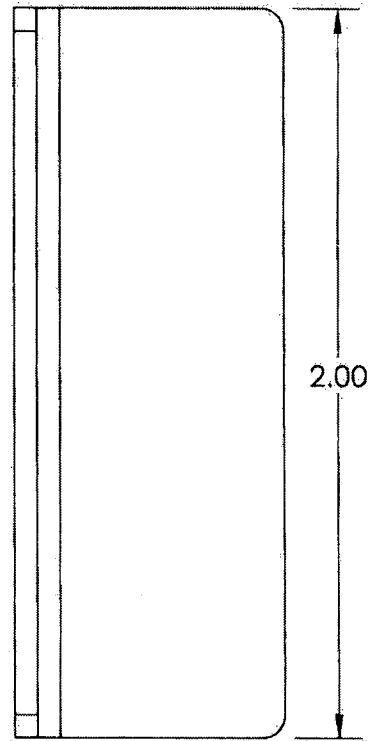
1 2 3 4 5

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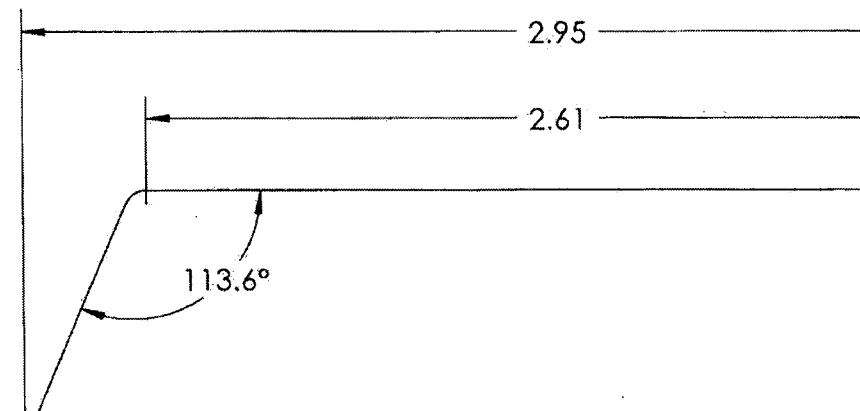
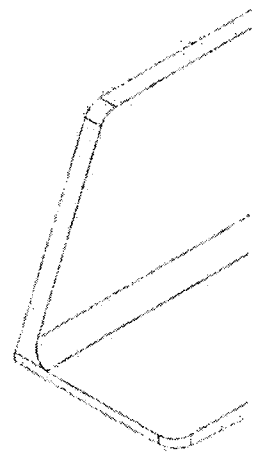
R.06

.03

2.95

2.61

113.6°



1 2 3 4 5

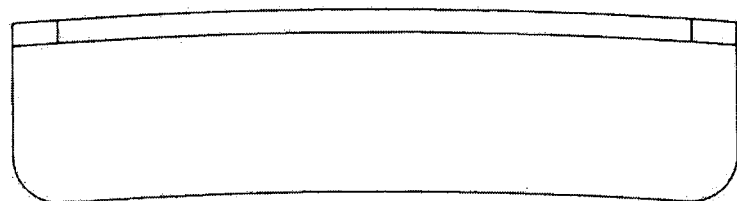
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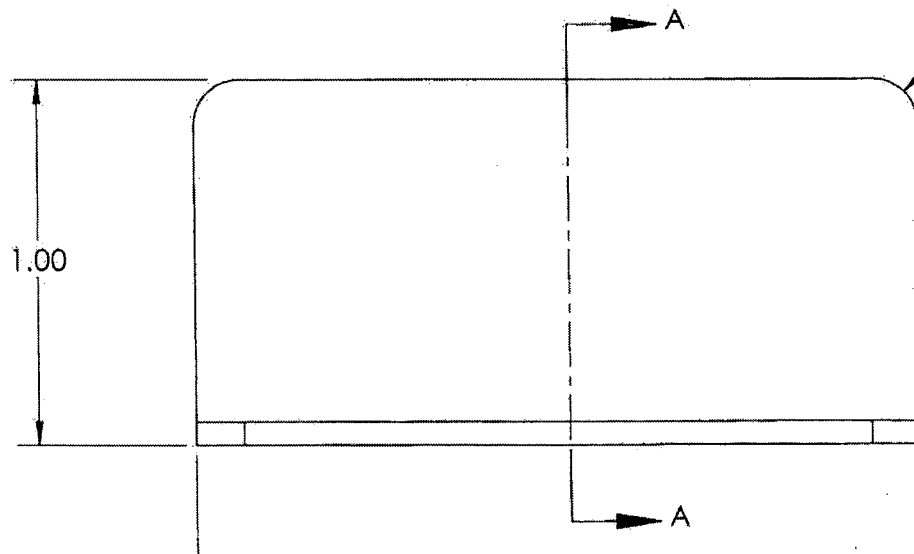
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C

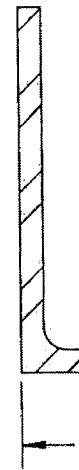
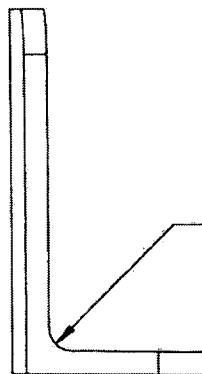
R13.0



R.13 4PL



R.06



| | | | | | | |
|--|--------------------------------------|------------------------|-----------------------|-----------------|---|--|
| APICAL INDUSTRIES, INC. | ENGINEERING CHANGE NOTICE NO. 03697 | | | | SHEET 1 OF 1 | |
| | DWG NO. 646.3800 | REV: N/C | PREPARED BY B. PETERS | DATE: 11/14/12 | EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC. | |
| | DWG TITLE: BRACKETS | | | | | |
| | APPROVED BY: ENGR <i>[Signature]</i> | MFG <i>[Signature]</i> | QC <i>[Signature]</i> | EFF: NEXT ORDER | | |
| TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE | REASON: ADDED ALTERNATE MATERIAL. | | | | ECR: D-12-006 | |

IS

1 PRIMARY MATERIAL: 7075-T651 ALUMINUM PER AMS-QQ-A-250/12.
ALTERNATE MATERIAL: 7075-T6511 ALUMINUM PER AMS-QQ-A-200/11.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 122938 ML5

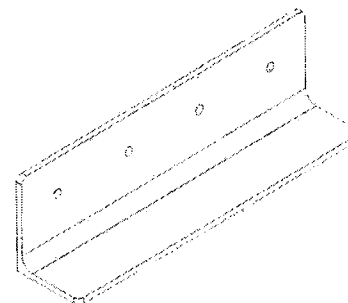
14-08-15

SHEET 1, ZONE A2 IS:

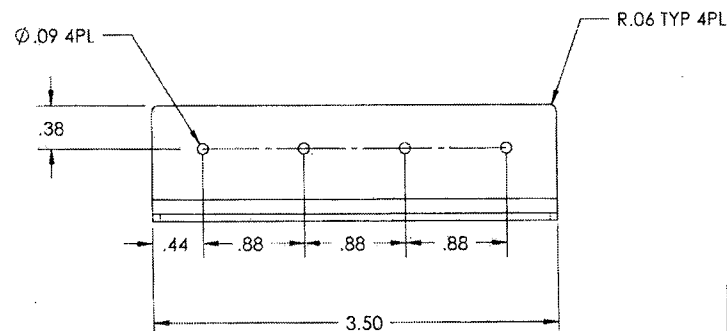
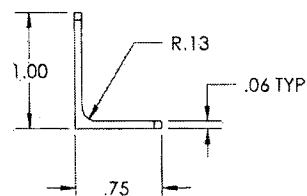
| | | | | | | |
|--|----|-------------|-----|-------------|--|---|
| F/N | TC | PART NUMBER | QTY | DESCRIPTION | MATERIAL | SPECIFICATION |
| DOCUMENTS EFFECTED: | | | | | CHANGE CATEGORY | DER REVIEW REQUIRED |
| <input type="checkbox"/> RFMS <input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRU <input type="checkbox"/> ICA <input type="checkbox"/> BOM | | | | | <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR | <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |

| REVISIONS | | | |
|-----------|-------------|------|----------|
| REV. | DESCRIPTION | DATE | APPROVED |
| | | | |
| | | | |
| | | | |

1. MATERIAL: ALUMINUM 7075-T651 AMS-QQ-A-250/12
2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377 J TYPE I CLASS N
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120



646.3810



UNINCORPORATED ECG (S)

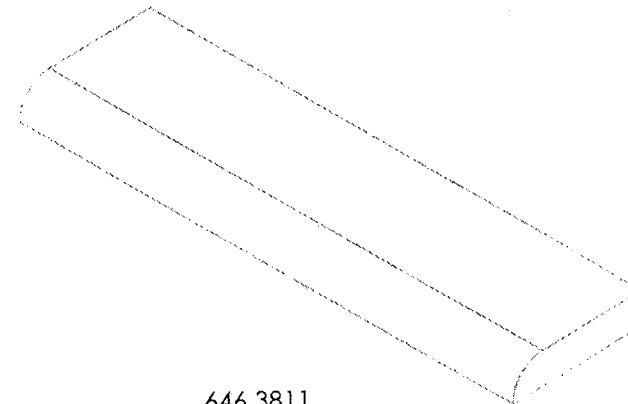
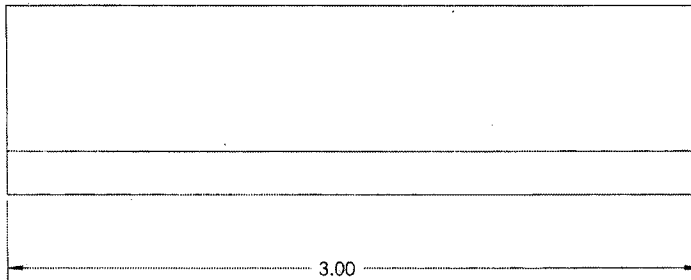
03697

| | | | | | |
|---|---|----------|--|-------|-------|
| | | 616.3814 | WIPER BRACKET | ↑ | ↑ |
| | | 616.3813 | STRUT BRACKET | ↑ | ↑ |
| | | 616.3812 | GUSSET BRACKET | ↑ | ↑ |
| | | 616.3811 | RADIUS BLOCK | ↑ | ↑ |
| | | 616.3810 | BRACKET | ↑ | ↑ |
| QTY | FIND # | PART # | DESCRIPTION | MAT'L | SPEC. |
| | | | PARTS LIST | | |
| QTY | | | | | |
| NEKI ASSY (5) | | | APICAL INDUSTRIES | | |
| 616.4000 | ORIGINAL DATE 06-19-05 DRAWN BY CHECKED P. CHANDLER P. BARANO DRAWING APPROVAL P. BARANO/219/08 | | 2608 TEMPLE HEIGHTS DR OCEANSIDE, CA 92036-3512 (760)724-5300 | | |
| EQUIPMENT NO. | | | BRACKETS | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE TO FACE TOLERANCES ARE: FINISH DIMENSIONS ± .015 HOLE DIMENSIONS ± .015 ANGLES ± .5° | | | 316 316L 616.3800 | | |
| SCALE NONE | | | SHEET 1 OF 5 | | |

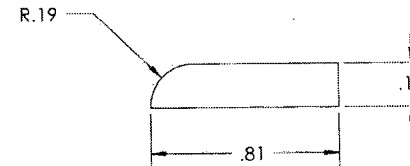
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| REVISION | | | |
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| REV. | DESCRIPTION | DATE | APPROVED |
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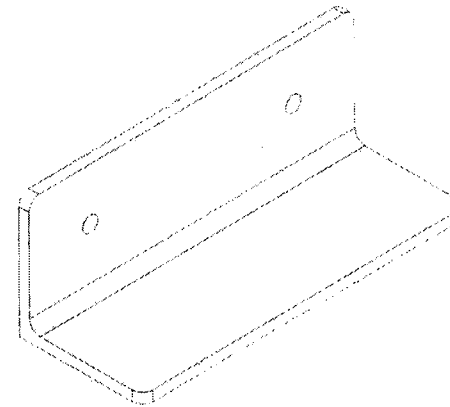
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|---------------|---|------------|---|------------|
| NEXT ASSY (S) | ORIGINAL DATE | 06-19-06 | APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300 | |
| | DESIGNED BY | J. GARDNER | | |
| | CHECKED BY | | BRACKETS | |
| | DRAWING APPROVAL | | | |
| | CUSTOMER NO. | | QTY OVER ORDER | DIMS. INCH |
| | UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 3 PLACE DECIMALS ±.010 4 PLACE DECIMALS ±.005 ANGLES ±.5° | | | |
| | | | 8 | 07M26 |
| | | | SCALE | NONE |
| | | | SHEET 2 OF 5 | |

646.3800

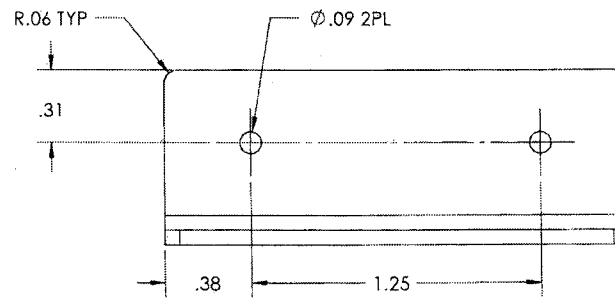
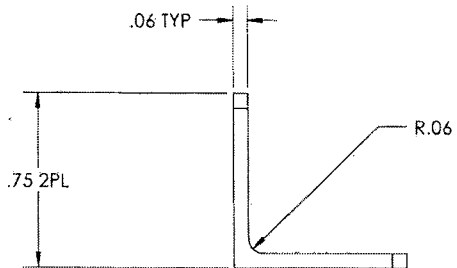
N/C

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| REVISIONS | | | |
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| REV | DESCRIPTION | DATE | APPROVAL |
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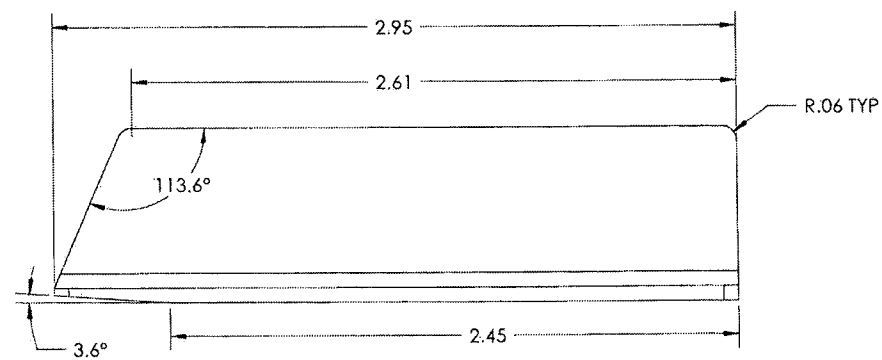
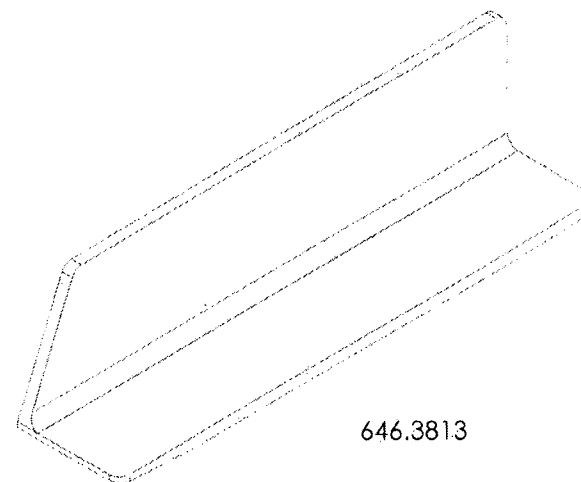


646.3812



| | | | | | |
|--|------------------|-----------------|--|----------|--|
| NEXT ASSY (S) | DESIGN DATE | 06-19-20 | APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300 | | |
| | DRAWN BY | CHECKED | | | |
| | 1. REVISION | | | | |
| | DRAWING APPROVAL | | | | |
| CONTRACT NO. | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES 1 PLACE DECIMALS = 1/16 3 PLACE DECIMALS = 1/32 ANGLES 2 1/2 | | BRACKETS | | | |
| | | UNIT CODE | ENG. NO. | REV. | |
| | | B | 07/12/20 | 646.3800 | |
| | | SCALE | | NONE | |
| | | SHEET | | 3 OF 3 | |

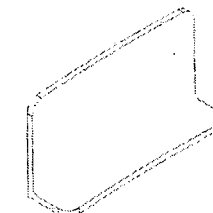
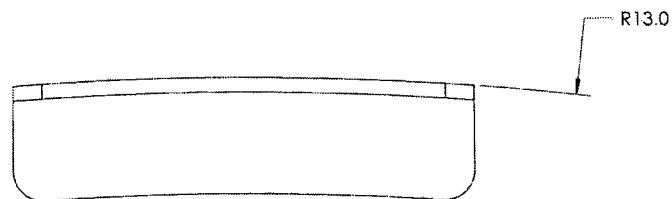
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|-----------|-------------|------|----------|
| REV | DESCRIPTION | DATE | APPROVED |
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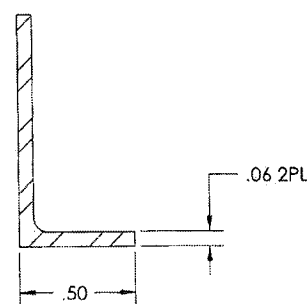
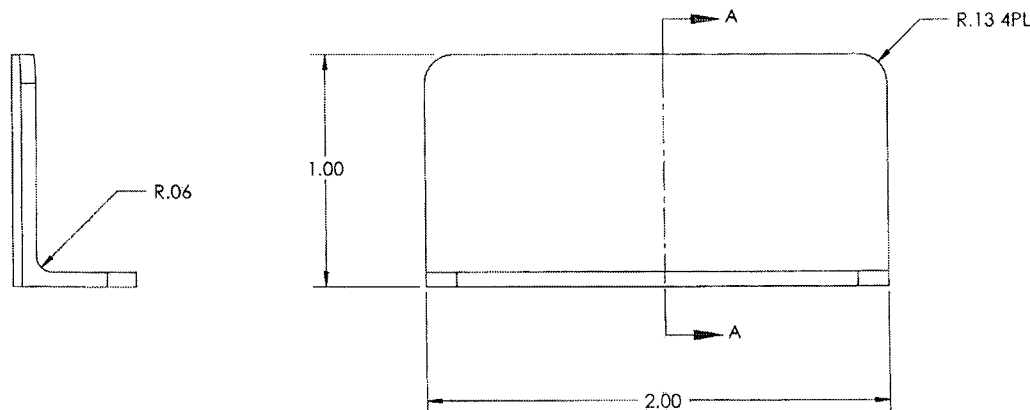
| | | | |
|---|---------------|-----------|--|
| NEXT ASSY (S) | ORIGINAL DATE | ON 10 DEC | APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR OCEANSIDE, CA 92056-3512 (760) 724-5300 |
| | DATE IN VP | 12/10/87 | |
| | ISSUED BY | | |
| | FOR APPROVAL | | |
| COMPARISON NO. | | | BRACKETS |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS DIMS + .0005 + .0005 | | | 2PI INCHES DIMS DIMS INCH 646.3800 SCALE NONE SHEET 4 OF 5 |

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| REVISIONS | | | |
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| REV | DESCRIPTION | DATE | APPROVED |
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646.3814



SECTION A-A

| | | | |
|---------------|---|---|--|
| NEXT ASSY (S) | DATE: 08-19-08 DRAWN BY: [REDACTED] CHECKED BY: [REDACTED] DRAWING APPROVAL: [REDACTED] | APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR OCEANSIDE, CA. 92056-3512 (760)724-5300 | |
| | CONTRACT NO | BRACKETS | |
| | UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMAL: ±.010 3 PLACE DECIMAL: ±.005 ANGLES: ±.5° | NET TO DECISION B 07M26 SCALE: NONE | DWG. NO 646.3800 SHEET 5 OF 5 |

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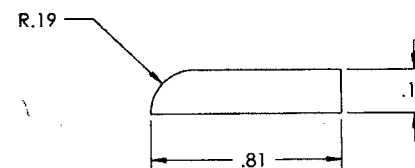
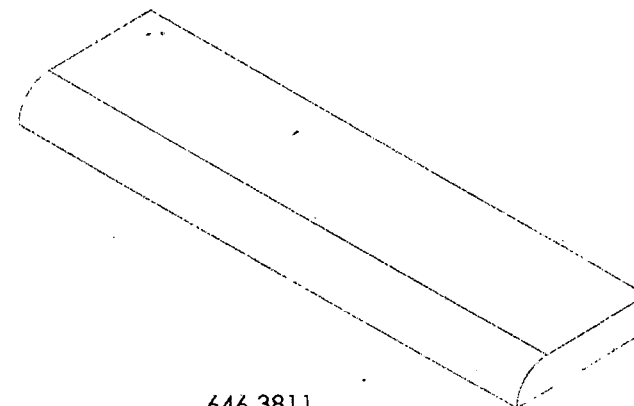
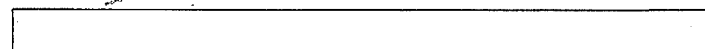
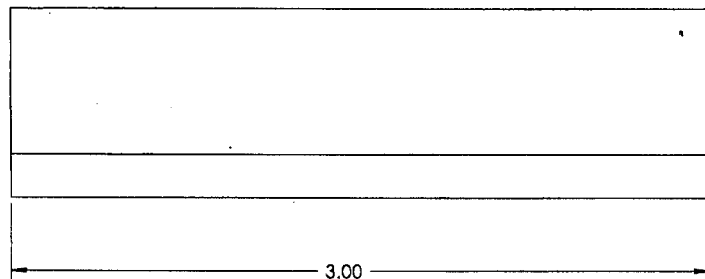
| REVISIONS | | | |
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| REV. | DESCRIPTION | DATE | APPROVED |
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|-----------------------|---------|--|--|------------|
| NEXT ASSY (S) | | ORIGINAL DATE 06/19/08 | APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300 | |
| DRAWN BY J GARDNER | CHECKED | DRAWING APPROVAL | | |
| CONTRACT NO. | | UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS 1:100 3 PLACE DECIMALS 1:200 ANGLES 2° | | |
| | | SCALE NONE | | |
| | | DATE CODE B 07/12/08 | DWG NO 646.3800 | REV N/C |
| | | SHEET 2 OF 5 | | |



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO25560**

Purchase Order Date 8/28/2014

PO Print Date 9/3/2014

Page Number 2 of 2

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Buyer

Michael Gregoire

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

FOB

FCA - (Free Carrier)

Ship Acct:

3 122938 646.3811 Radius Block 9/3/2014 15.00
No
9/3/2014

\$3.75 \$56.25

Parts to be plated as per Drawing 646.3800 Rev. N/C

Finish: Hard Anodize IAW MIL-A-8625 TYPE 3, Class 2, Color Black

Line Total: \$56.25

4 71401-45

9/3/2014

0.00

\$0.00

\$0.00

No

Each

9/3/2014

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

Line Total: \$0.00

PO Total: \$155.25

CL

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 5

Change Date: 9/3/2014



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 63237

Date: 03-Sep-14

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

| Terms | | Ship Via | |
|--|--|----------|-------|
| Quantity | Description | Rev: | Line: |
| 5 ea | Part: 647.1511 LOWER DEFLECTOR HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 Job: 20140564 PO: PO25560 | | |
| 5 ea | Part: 647.1510 UPPER DEFLECTOR HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 Job: 20140565 PO: PO25560 | | |
| 15 ea | Part: 646.3811 RADIUS BLOCK HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 Job: 20140566 PO: PO25560 | | |
| <p>Certificate of Conformance</p> <p>A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.</p> <p>ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY</p> <p>DATE : <u>3/8/14</u></p> <p>CERTIFIED SIGNATURE <u></u></p> <p>RECEIVER SIGNATURE : _____</p> | | | |